



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/632,609	08/04/2000	Lawrence W. Yonge III	04838-062001	2611

26161 7590 02/06/2004

FISH & RICHARDSON PC  
225 FRANKLIN ST  
BOSTON, MA 02110

EXAMINER

GEORGE, KEITH M

ART UNIT	PAPER NUMBER
----------	--------------

2663

DATE MAILED: 02/06/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/632,609

Applicant(s)

YONGE III ET AL.

Examiner

Keith M. George

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3, 17, 20-24, 38 and 41-44 is/are rejected.  
7) ☒ Claim(s) 4-16, 18, 19, 25-37, 39 and 40 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 04 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This application has been reassigned to examiner Keith M. George, AU 2663.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 17, 22, 23, 38, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson, U.S. Patent 6,192,397, hereinafter Thompson in view of Ahmadi et al., U.S. Patent 5,384,777, hereinafter Ahmadi.
4. Referring to claims 1 and 22, Thompson discloses a method and program comprising having a first device (i.e. fig. 1, 105), which can be any of the plurality of peer devices (i.e. col. 3, ll. 55-54), exchange messages with a second device (i.e. fig. 1, 110), which can be any one of the plurality of peer devices (i.e. col. 3, ll. 55-54), over the medium using CSMA service (i.e. col. 3, ll. 60-65; the Ethernet network uses IEEE802.3 standards) to establish a session of contention-free intervals within the CSMA service for use by the first and second devices for contention-free traffic between devices (i.e. fig. 4, two devices are designated as master and slave). Thompson teaches that the master controls the slave timing through the transmission of the clocking signal (i.e. fig. 5). Thompson teaches all of the above with the possible exception that some of the other peer devices are made aware of the session of contention-free intervals and

Art Unit: 2663

refrain from transmitting during the session and having the first device determine when the transmission can occur on the medium during contention-free intervals based on the exchanged messages. Ahmadi teaches a Medium Access Control (MAC) protocol for access from a plurality of remote stations to a base station on a LAN. The MAC protocol is based on a reservation scheme for user data traffic (contention-free traffic) and a random access technique (CSMA) for control and signaling traffic. The fixed frame structure consists of three periods (A, B and C) along with their respective headers. The first period, the A period, is the outbound channel which is used exclusively for data transfer from the base station to the remote stations. The following period, the B period, is the inbound channel that is used for contention-free data transfer from the remote stations to the base station. The last period, the C period, is the control channel used for the transmission of reservation requests and data from the remote stations to the base stations in a random-access contention mode using a slotted Aloha protocol (column 2, lines 28-50). Ahmadi also teaches that a slot allocation schedule is specified in the B header (the first device determines when the transmission can occur) so that each remote station will know when to transmit in the B period (some of the other peer devices are made aware of the session and refrain from transmitting) (column 6, lines 15-17). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art that if the teachings of Thompson were to be used where the end devices and the central device units are part of an Ethernet local area network (column 3, lines 59-61) then the teachings of Ahmadi would be required to continue to provide the contention-free communication between the two peers. The teachings of Ahmadi would clearly modify the teachings of Thompson in the presence of a plurality of peers. One of ordinary skill in the art would be motivated to apply the teachings of Ahmadi to Thompson to

Art Unit: 2663

coordinate the channel bandwidth which is shared by all stations in a fair, flexible, demand-driven manner and achieve a high throughput (Ahmadi, column 2, lines 22-25).

5. Referring to claims 2 and 23, Thompson discloses the first device is the master (i.e. fig. 4, 445) and the second becomes the slave (i.e. fig. 4, 450). It is inherent that master will be transmitting downstream and slave transmitting upstream.

6. Referring to claims 17 and 38, Thompson discloses the medium as a power line (i.e. fig. 1, Ethernet network include power lines).

7. Referring to claims 43 and 44, Thompson discloses a plurality of peer devices (i.e. fig. 1, 105, 110) represent less than all the communicating devices over the medium (i.e. fig. 1, 115, 120, etc. which also uses medium 150).

8. Claims 3 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson and Ahmadi as applied to claims 2 and 23 above, and further in view of Choi, U.S. Patent 5,745,769, hereinafter Choi. Thompson and Ahmadi teach the method described above with the possible exception of polling. Choi teaches polling between master and slave devices (i.e. col. 2, ll. 37-40). It would have been obvious for an ordinary person skilled in the art at the time of the invention to include polling as taught by Choi with the method and program of Thompson in order for the master to control the communication of the slave device. The motivation is to have a way to communicate between the devices once one device is determined to be master and other to be slave.

9. Claims 20-21 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson and Ahmadi as applied to claims 1 and 22 above, and further in view of Ojard et al., U.S. Patent 6,130,894, hereinafter Ojard. Thompson and Ahmadi teach all of the above with the

Art Unit: 2663

possible exception that the payload is not likely to be heard and include control information including channel map index for decoding and demodulating. Ojard teaches that header and payload are modulated differently. It would have been obvious for an ordinary person skilled in the art to use different modulating techniques for header and payload as taught by Ojard with the method and program of Thompson and Ahmadi. The motivation is to simplify the complexity of the carrier sense and make the demodulation more error resistant. It is inherent to include the necessary information in an index in order to transport it to the destination. The motivation is to allow the destination to retrieve the transmitted information.

#### ***Allowable Subject Matter***

10. Claims 4-16, 18, 19, 25-37, 39 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1 and 22 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2663

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 703-305-6531. The examiner can normally be reached on M-Th 7:00-4:30, alternate F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Keith M. George  
30 January 2004



CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 2/2/04